

superintend the erection of the new wheel for the British Columbia Electric Railway Co., at Lake Buntzen.

C. J. Digby has been awarded the contract for the construction of a quarter mile trestle to connect the Pacific Coal Co.'s incline at Hosmer, B.C., with the tippie, and also the contract for the erection of a new rink for the Fernie Rink Co., Fernie, B.C., which will cost about \$18,700.

The Northern Bank of Canada will erect a five story office building in Victoria, B.C.

The Okanagan Flour Mills Co., Armstrong, B.C., have recently installed a 50 h.p. Allis-Chalmers-Bullock induction motor for the operation of their flour mill.

The electric light plant and waterworks system, Kelowna, B.C., will be extended at a cost of about \$40,000.

The Electric Light, Power, & Heat Co., Nanaimo, B.C., will increase the capacity of their plant by building a large dam at Westwood's swamp.

A new public school will be erected at Victoria, B.C., at a cost of about \$30,000.

The North Western Telephone Co. have taken over the management of the telephone system at Phoenix, B.C.

In connection with the new Howe bridge at Fernie, B.C., the Great Northern Railway Co. have placed a large order with the Royal City Lumber Co., New Westminster, B.C., for several large timber trusses, 75 feet in length, 18 inches deep and 9 1/4 inches thick. The Royal City Co. have closed their shingle and cedar mills for a short time and the sash and door factory will be put on half-shift, but the operations of the main mill will be extended throughout the winter months.

Application has been made by H. A. Mellon, Vancouver, B.C., for power from the Rainy River or Cates' Creek for the operation of a pulp mill in connection with a pulp and paper industry, which will be established at a cost of \$1,000,000. The mills will cover eleven acres of ground. Monroe Ferguson, of the same city, made an application to develop power from Stewart Creek, but this was dismissed owing to the opposition of the Abitjstford Lumber Co., who are planning the erection of a shingle mill at the Creek.

The Fraser River Sawmills, Millside, B.C., will install a complete new mechanical equipment in the engine room, and increase the capacity of the plant to a quarter of a million feet of rough lumber per day. The changes to be carried out will aggregate in value \$100,000.

The Boundry Copper Mines in British Columbia, have shipped more than a million tons of ore this year.

The Columbia River Lumber Co., Golden, B.C., are duplicating their present power plant. The new outfit consists of a 75 k.w. 3 phase 60 cycle 2,300 volt generator, 4 k.w. exciter, and two panel white Italian marble switchboard, all of Allis-Chalmers-Bullock manufacture; also a 14x14 inch Robb-Armstrong horizontal engine.

The Dominion Bank are opening a branch in Vancouver, B.C.

Within the last few days the Canadian Concentrating & Smelting Co., who own the Monarch mine at Field, B.C., have closed a contract with a concentrating plant in Toronto, which provides for a shipment of 1,000

tons of ore monthly, beginning on December 20. Mr. A. Wheeler, the newly elected managing director, will construct a sleigh road from the mine to Field, on which to transport the ore to the main line of the Canadian Pacific Railway.

The Otis-Fensom Elevator Co., Toronto, have secured a site in Vancouver, B.C., on which they will erect a four story factory, 90x25 feet, at a cost of about \$30,000.

#### AMMONIA FROM FUEL.

The province of Ontario contains splendid peat deposits and much money has been spent in trying to make a fuel which could be sold at a price to compete with coal. The success in this direction has, however, been so slight that the information that ammonia is being extracted from peat in England is of importance.

United States Consul Halstead, of Birmingham, describes a new English process for obtaining ammonia from peat.

"A great difficulty in the commercial utilization of peat has always been the large amount of water it contains, which averages 90 per cent. To eliminate the existing moisture down to 70 per cent. is a comparatively simple matter, but to reduce the moisture to a degree where the peat can be utilized for fuel is a long and expensive process.

"The Woltereck process has at last overcome this difficulty. By this new method it has been finally determined on a manufacturing scale that a minimum yield of 5 per cent. of sulphate of ammonia is obtained from the peat, calculated as theoretically dry. The chief products of the Woltereck process namely, sulphate of ammonia and paraffin tar, have a practically unlimited market, and the market for acetic acid, acetates, and their derivative—acetone—is continually expanding, especially that of the latter, of which enormous quantities are required by the manufacturers of smokeless powder. In addition, the ash of peat is salable to the farmer as a cheap fertilizer, since it contains potassium salts, lime and phosphorous acid in available form. After the peat has undergone the necessary harvesting it is conveyed to the works and automatically fed into hoppers working with compressed air and quickly dropped into the furnaces. Here it is subjected to moist combustion by means of a blast of air charged with water vapor at a regulated temperature. The resulting gases contain paraffin tars, acetic acid and ammonia. The paraffin tars are removed by the Woltereck scrubber which retains all tarry matter without causing any condensation and consequent loss of ammonia. The acetic acid is next absorbed in the alkali tower, where the gases meet a hot solution of soda or milk of lime and combine with it to form acetate of soda or of lime, which may afterward be treated for the recovery of acetic acid or the production of acetone. The gases pass from the alkali tower to the acid towers, where they meet a stream of hot sulphuric acid, which combines with the ammonia to form sulphate of ammonia, the chief object of the process. After the acid is completely neutralized it is drawn off to crystallizing vats. The solution of the sulphate is there further concentrated and allowed to crystallize, and after centrifugalizing to remove any adherent liquor, is ready for shipment.

"The paraffin tar is drawn off from the scrubber, when a sample of the oil therein

solidifies on cooling. It is then subjected to distillation to remove the lighter oils, and a crude paraffin wax worth about \$19.50 a ton remains without further purification. The acetate solution obtained from the alkali tower is evaporated to dryness and distilled with sulphuric or hydrochloric acid to obtain concentrated acetic acid, or can be subjected to dry distillation to produce acetone."

#### WELDED A HEAVY ENGINE FRAME.

Quite a number of persons were present at the Round House on Tuesday night to see a very interesting job done—the welding of the heavy steel frame of an engine now in the shop for repairs. This is the first job of the kind done in Inverness, or even on this side of the Island, though the process has been in use in Glace Bay by the Dominion Coal Co. in repairing machinery. Daniel Bell, foreman of the Dominion Coal Co.'s foundry at Glace Bay, came over to do the job.—Inverness News.

The composition used in welding of this class is known as Thermit.

#### Publications Worth Reading.

Any Manufacturer or Dealer in Supplies for this Column is invited to send Books on Business Topics for Review or Booklets, Pamphlets, etc., for Reference.

**CALENDARS:** The B. Greening Wire Co., Hamilton, Ont., have sent their attractive calendar containing views of the head office and works at Hamilton, and half tone of the founder and the present head of the firm. The figures are of fair size and may be seen at some considerable distance.

Canadian Fairbanks Co., of Montreal, have issued a splendid calendar, being composed of a separate sheet the full size of the calendar for each month. The figures are large. The space reserved above the figures is devoted to enumerating and illustrating many of the lines handled by the Canadian Fairbanks Co.

Winnipeg, Man., is being further advertised by the Winnipeg Development & Industrial Bureau by means of a hanger, containing besides a calendar, maps showing Winnipeg as a railway centre and a large amount of statistical information concerning the city of Winnipeg, its growth, development and possibilities.

**ELECTRICAL INSTRUMENTS:** The Bristol Co., of Waterbury, Conn., are issuing three new bulletins covering their electrical instruments: Bulletin No. 61, describing Recording Voltmeters, which is in 12 pages, illustrated, and is very complete; Bulletin No. 62, describing recording ammeters lists new form of portable instrument, which is now being manufactured and is very attractive in its make-up. Bulletin No. 63 covers a line of recording wattmeters and is somewhat larger than the others, having 19 pages. This bulletin, besides illustrating the new portable form of wattmeter also shows a very complete list of single two phase and balanced three-phase alternating current instruments, something that was absent from former bulletins. These catalogues will be appreciated by engineers, who are usually in a quandary as to the best type of instrument applicable to the loads for which they intend to design, and will be found very helpful in locating the proper instrument manufactured.